09869871 28/10/2003

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 NEWS  1          Web Page URLs for STN Seminar Schedule - N. America
 NEWS  2          "Ask CAS" for self-help around the clock
 NEWS  3  SEP 09  CA/CAplus records now contain indexing from 1907 to the
                  present
 NEWS  4  AUG 05  New pricing for EUROPATFULL and PCTFULL effective
                  August 1, 2003
 NEWS  5  AUG 13  Field Availability (/FA) field enhanced in BEILSTEIN
 NEWS  6  AUG 18  Data available for download as a PDF in RDISCLOSURE
 NEWS  7  AUG 18  Simultaneous left and right truncation added to PASCAL
 NEWS  8  AUG 18  FROSTI and KOSMET enhanced with Simultaneous Left and Righ
                  Truncation
 NEWS  9  AUG 18  Simultaneous left and right truncation added to ANABSTR
 NEWS 10  SEP 22  DIPPR file reloaded
 NEWS 11  SEP 25  INPADOC: Legal Status data to be reloaded
 NEWS 12  SEP 29  DISSABS now available on STN
 NEWS 13  OCT 10  PCTFULL: Two new display fields added
 NEWS 14  OCT 21  BIOSIS file reloaded and enhanced

 NEWS EXPRESS  OCTOBER 01 CURRENT WINDOWS VERSION IS V6.01a, CURRENT
               MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),
               AND CURRENT DISCOVER FILE IS DATED 23 SEPTEMBER 2003
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FILE 'HOME' ENTERED AT 08:22:59 ON 28 OCT 2003

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

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09869871 28/10/2003

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DICTIONARY FILE UPDATES: 27 OCT 2003 HIGHEST RN 609766-09-8

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2003

Please note that search-term pricing does apply when
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Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP
PROPERTIES for more information. See STNote 27, Searching Properties
in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=>
Uploading 09869871.str

L1 STRUCTURE UPLOADED

=> s l1 full
FULL SEARCH INITIATED 08:23:23 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 104750 TO ITERATE

100.0% PROCESSED 104750 ITERATIONS 27880 ANSWERS
SEARCH TIME: 00.00.02

L2 27880 SEA SSS FUL L1

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	148.15	148.36

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FILE COVERS 1907 - 28 Oct 2003 VOL 139 ISS 18

Kamal Saeed

09869871 28/10/2003

FILE LAST UPDATED: 27 Oct 2003 (20031027/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> s l2 and carbon(l)dioxide
         28306 L2
       1022637 CARBON
         22789 CARBONS
       1030930 CARBON
                 (CARBON OR CARBONS)
        399415 DIOXIDE
          6241 DIOXIDES
        400983 DIOXIDE
                 (DIOXIDE OR DIOXIDES)
        193123 CARBON(L)DIOXIDE
L3         539 L2 AND CARBON(L)DIOXIDE

=> s l3 and caesium(l)carbonate
           197 CAESIUM
        241122 CARBONATE
         60626 CARBONATES
        271250 CARBONATE
                 (CARBONATE OR CARBONATES)
             3 CAESIUM(L)CARBONATE
L4           0 L3 AND CAESIUM(L)CARBONATE

=> s l3 and alcohol
        207389 ALCOHOL
        142279 ALCOHOLS
        323750 ALCOHOL
                 (ALCOHOL OR ALCOHOLS)
        527297 ALC
        175568 ALCS
        617124 ALC
                 (ALC OR ALCS)
        731063 ALCOHOL
                 (ALCOHOL OR ALC)
L5         133 L3 AND ALCOHOL

=> s l5 and base
        583048 BASE
        136027 BASES
        666755 BASE
                 (BASE OR BASES)
L6          19 L5 AND BASE

=> d ibib abs hitstr tot
```

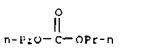
Kamal Saeed

L6 ANSWER 1 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2003:461810 CAPLUS
DOCUMENT NUMBER: 139:164517
TITLE: Synthesis of Carbonates and Related Compounds from **Carbon Dioxide** via Methanesulfonyl Carbonates
AUTHOR(S): Bratt, Mark O.; Taylor, Paul C.
CORPORATE SOURCE: Department of Chemistry, University of Warwick, Coventry, CV4 7AL, UK
SOURCE: Journal of Organic Chemistry (2003), 68(14), 5439-5444
CODEN: JOCEAH; ISSN: 0022-3263
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

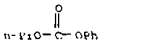
AB Carbonate anions resulting from reaction of primary or secondary **alcs.** with **carbon dioxide**, e.g. PrOC(:O)O-, when added to methanesulfonic anhydride in cooled MeCl.tplbond.N, yield methanesulfonyl carbonates, e.g. PrOC(:O)OSO2Me, a new class of synthetic intermediate. **Base** mediated reaction of the methanesulfonyl carbonates with **alcs.**, thiols, and amines yields carbonates, thiocarbonates, and carbamates, e.g. PrOCO2Ph, 3,5 Cl2C6H3SCO2Pr, and PrOC(O)NHBu, resp. Overall yields for the three steps vary from 19% to 42%.

IT **623-96-1P**, Dipropyl carbonate **13183-16-9P** **13509-27-8P**, Methyl phenyl carbonate **25919-06-6P** **28170-07-2P** **144397-85-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of carbonates, thiocarbonates, and carbamates from **carbon dioxide** via reaction of methanesulfonyl carbonate intermediate with **alcs.**, thiols, and amines)

RN 623-96-1 CAPLUS
CN Carbonic acid, dipropyl ester (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

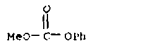


RN 13183-16-9 CAPLUS
CN Carbonic acid, phenyl propyl ester (7CI, 8CI, 9CI) (CA INDEX NAME)

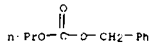


RN 13509-27-8 CAPLUS
CN Carbonic acid, methyl phenyl ester (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

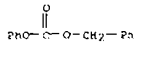
L6 ANSWER 1 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)



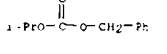
RN 25919-06-6 CAPLUS
CN Carbonic acid, phenylmethyl propyl ester (9CI) (CA INDEX NAME)



RN 28170-07-2 CAPLUS
CN Carbonic acid, phenyl phenylmethyl ester (9CI) (CA INDEX NAME)



RN 144397-85-3 CAPLUS
CN Carbonic acid, 1-methylethyl phenylmethyl ester (9CI) (CA INDEX NAME)



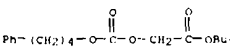
REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:287698 CAPLUS
DOCUMENT NUMBER: 137:310430
TITLE: Efficient Cs2CO3-promoted solution and solid phase synthesis of carbonates and carbamates in the presence of TBAI
AUTHOR(S): Salvatore, Ralph N.; Chu, Felxia; Nagle, Advait S.; Kapxhiu, Elona A.; Cross, Richard M.; Jung, Kyung Woon
CORPORATE SOURCE: Department of Chemistry, University of South Florida, Tampa, FL, 33620 5250, USA
SOURCE: Tetrahedron (2002), 58(17), 3329-3347
CODEN: TETRAB; ISSN: 0040-4020
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

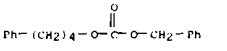
AB Novel soln. and solid phase methods for the synthesis of carbonates and carbamates were developed using cesium **bases** and TBAI via a three-component coupling. Cesium carbonate not only promoted successful carbonylations of **alcs.** and carbamations of amines, but also suppressed common side reactions traditionally seen using existing protocols. Various **alcs.** and amines were examd., using a wide array of alkyl halides, and the results demonstrated that this methodol. was highly chemoselective. In particular, use of either sterically demanding substrates or amino acid derivs. afforded the corresponding products exclusively, offering a wide variety of applications such as novel protecting groups and peptidomimetic syntheses.

IT **223142-79-8P** **223142-80-1P** **223142-82-3P** **223142-85-6P**, Butyl 4-phenylbutyl carbonate **234106-34-4P** **234106-36-6P** **234106-39-9P** **234106-46-8P** **234106-50-4P** **234106-52-6P** **289725-66-2P** **470690-38-1P** **470690-39-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(efficient cesium carbonate-promoted soln. and solid phase synthesis of carbonates and carbamates in presence of tetrabutylammonium iodide)

RN 223142-79-8 CAPLUS
CN Acetic acid, [[(4-phenylbutoxy)carbonyl]oxy] , 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

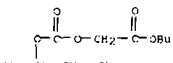


RN 223142-80-1 CAPLUS
CN Carbonic acid, 4-phenylbutyl phenylmethyl ester (9CI) (CA INDEX NAME)

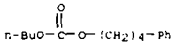


RN 223142-82-3 CAPLUS
CN Acetic acid, [[(1-methyl-2-phenylethoxy)carbonyl]oxy] , 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

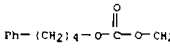
L6 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)



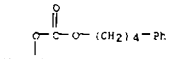
RN 223142-85-6 CAPLUS
CN Carbonic acid, butyl 4-phenylbutyl ester (9CI) (CA INDEX NAME)



RN 234106-34-4 CAPLUS
CN Carbonic acid, 4-phenylbutyl 2-propenyl ester (9CI) (CA INDEX NAME)



RN 234106-36-6 CAPLUS
CN Carbonic acid, 1-methylpropyl 4-phenylbutyl ester (9CI) (CA INDEX NAME)



RN 234106-39-9 CAPLUS
CN Carbonic acid, 1-methyl-2-phenylethyl phenylmethyl ester (9CI) (CA INDEX NAME)

RN 234106-46-8 CAPLUS
CN Propanoic acid, 2-[[(phenylmethoxy)carbonyl]oxy]-, ethyl ester, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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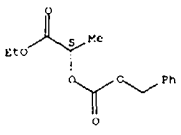
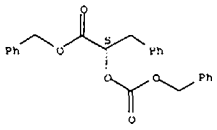
L6 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)



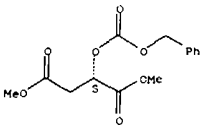
RN 234106-50-4 CAPLUS
CN Benzenepropanoic acid, .alpha.-[[(phenylmethoxy)carbonyl]oxy]-, phenylmethyl ester, (.alpha.S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

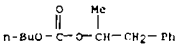


RN 234106-52-6 CAPLUS
CN Butanedioic acid, [[(phenylmethoxy)carbonyl]oxy]-, dimethyl ester, (2S) (9CI) (CA INDEX NAME)

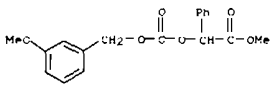
Absolute stereochemistry.



RN 289725-66-2 CAPLUS
CN Carbonic acid, butyl 1-methyl-2-phenylethyl ester (9CI) (CA INDEX NAME)

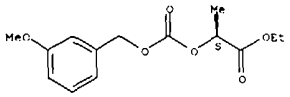


L6 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)
RN 470690-38-1 CAPLUS
CN Benzeneacetic acid, .alpha.-[[[(3-methoxyphenyl)methoxy]carbonyl]oxy]-, methyl ester (9CI) (CA INDEX NAME)



RN 470690-39-2 CAPLUS
CN Propanoic acid, 2-[[[(3-methoxyphenyl)methoxy]carbonyl]oxy]-, ethyl ester, (2S)- (9CI) (CA INDEX NAME)

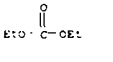
Absolute stereochemistry.



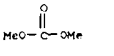
REFERENCE COUNT: 104 THERE ARE 104 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 3 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:14548 CAPLUS
DOCUMENT NUMBER: 136:134493
TITLE: Catalytic reaction of supercritical and subcritical **carbon dioxide**. Synthesis of dimethyl carbonate using solid **base** catalysts
AUTHOR(S): Fujita, Shinichiro; Arai, Masahiko
CORPORATE SOURCE: Grad. Sch. Eng., Hokkaido Univ., Japan
SOURCE: Chorinkai Saishin Gijutsu (2001), 5, 79-83
CODEN: CSGIF5
PUBLISHER: Jasuko Repotosha
DOCUMENT TYPE: Journal
LANGUAGE: Japanese
OTHER SOURCE(S): CASREACT 136:134493
AB Synthesis of di-Me carbonate (DMC) from MeOH and CO2 using K2CO3 as a catalyst was carried out to clarify CO2 pressure dependence in the presence of MeI as a promoter. Two max. yields of DMC appeared around 4.5 and 8 MPa; the latter corresponds to supercrit. pressure of CO2. This effect is attributed to the increase of soly. of CO2. Deactivation of solid **base** catalysts was interpreted as the result of formation of KI by iodination of the catalyst with MI. The reaction mechanism was also discussed. Then, one-step synthesis of DMC was studied using CO2, cyclic ethers, **alcs.**, and solid **base** catalysts. The reaction using CO2 of 8 MPa, ethylene oxide (EP), MeOH and MgO in PhMe at 150.degree. gave 96.1% conversion of EO and 28.0% selectivity to DMC along with 36.7% selectivity to 2-methoxy ethanol as a byproduct. Optimization of the reaction conditions and catalyst prepn. is needed to increase DMC yield.
IT **616-38-6P**, Dimethyl carbonate
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(catalytic reaction of supercrit. and subcrit. **carbon dioxide** for synthesis of di-Me carbonate using solid **base** catalysts)
RN 616-38-6 CAPLUS
CN Carbonic acid, dimethyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)

L6 ANSWER 4 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:294378 CAPLUS
DOCUMENT NUMBER: 136:96067
TITLE: Synthesis of dimethyl carbonate from **carbon dioxide** and methanol in the presence of methyl iodide and **base** catalysts under mild conditions: effect of reaction conditions and reaction mechanism
AUTHOR(S): Fujita, Shin-ichiro; Bhanage, Bhalchandra M.; Arai, Masahiko; Ikushima, Yutaka
CORPORATE SOURCE: Division of Materials Science and Engineering, Graduate School of Engineering, Hokkaido University, Sapporo, 060-8628, Japan
SOURCE: Green Chemistry (2001), 3(2), 87-91
CODEN: GRCHFJ; ISSN: 1463-9262
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The synthesis of Me2CO3 (DMC) from methanol and CO2 was studied in the presence of Me iodide and various **base** catalysts. Among the catalysts used, potassium carbonate was found to be most active. Di Me ether (DME) is formed as a byproduct. When the reaction was carried out at various CO2 pressures, two maxima in DMC formation were obsd. at 4.5 and 8 MPa, while DME formation decreased monotonically with increasing CO2 pressure. The effects of the amts. of Me iodide and potassium carbonate on DMC and DME formation were also investigated. Mechanistic studies suggest that DMC and DME are produced in parallel pathways and Me iodide is involved in the formation of both DMC and DME. Other **alcs.** show less reactivity than methanol.
IT **105-58-8**, Diethyl carbonate
RL: IMF (Industrial manufacture); PREP (Preparation)
(catalysts for prodn. of di-Et carbonate from **carbon dioxide** and ethanol)
RN 105-58-8 CAPLUS
CN Carbonic acid, diethyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



IT **616-38-6**, Dimethyl carbonate
RL: IMF (Industrial manufacture); PREP (Preparation)
(prodn. from **carbon dioxide** and methanol in presence of Me iodide and **base** catalysts)
RN 616-38-6 CAPLUS
CN Carbonic acid, dimethyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 4 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

L6 ANSWER 5 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:495224 CAPLUS
DOCUMENT NUMBER: 133:251851
TITLE: Electrogenerated-**base**-promoted synthesis of organic carbonates from **alcohols** and **carbon dioxide**
AUTHOR(S): Casadei, Maria Antonietta; Cesa, Stefania; Rossi, Lucio
CORPORATE SOURCE: Dipartimento di Studi di Chimica e Tecnologia delle Sostanze Biologicamente Attive, Universita degli Studi "La Sapienza", Rome, I 00185, Italy
SOURCE: European Journal of Organic Chemistry (2000), (13), 2445-2448
CODEN: EJOCFK; ISSN: 1434-193X
PUBLISHER: Wiley VCH Verlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 133:251851

AB Electrogenerated **bases** promote the reaction between primary **alcs.** and CO2 to give org. carbonates in excellent yields. Secondary **alcs.** are converted in moderate yields, whereas tertiary **alcs.** and phenols are unreactive. 1,2 Diols give a mixt. of both cyclic and linear di- and monocarbonates. These latter are intermediates in the reaction pathway leading to the cyclic derivs.

IT **294844-50-1P 294844-51-2P**
RL: BYP (Byproduct); PREP (Preparation)
(prepn. of org. carbonates from **alcs.** and **carbon dioxide** promoted by electrogenerated **base**)

RN 294844-50-1 CAPLUS
CN Carbonic acid, ethyl 2-hydroxy-1,2-diphenylethyl ester (9CI) (CA INDEX NAME)

RN 294844-51-2 CAPLUS
CN Carbonic acid, 1,2-diphenyl 1,2-ethanediyl diethyl ester (9CI) (CA INDEX NAME)

IT **616-38-6P 6324-79-4P 22768-02-1P 57362-02-4P 228403-62-1P 228403-63-2P 232598-13-9P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of org. carbonates from **alcs.** and **carbon dioxide** promoted by electrogenerated **base**)

RN 616-38-6 CAPLUS

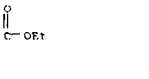
L6 ANSWER 5 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)
CN Carbonic acid, dimethyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)

RN 6324-79-4 CAPLUS
CN Carbonic acid, ethyl 3-phenylpropyl ester (8CI, 9CI) (CA INDEX NAME)

RN 22768-02-1 CAPLUS
CN Carbonic acid, ethyl phenylmethyl ester (9CI) (CA INDEX NAME)

RN 57362-02-4 CAPLUS
CN Carbonic acid, ethyl 1-phenylethyl ester (9CI) (CA INDEX NAME)

RN 228403-62-1 CAPLUS
CN Carbonic acid, ethyl 2-hydroxy-2-phenylpropyl ester (9CI) (CA INDEX NAME)



RN 228403-63-2 CAPLUS
CN Carbonic acid, ethyl 2-hydroxy-2-phenylethyl ester (9CI) (CA INDEX NAME)

RN 232598-13-9 CAPLUS
CN Carbonic acid, 1-phenyl-1,2-ethanediyl diethyl ester (9CI) (CA INDEX NAME)

L6 ANSWER 5 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

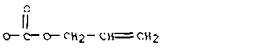
Kamal Saeed

L6 ANSWER 6 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:467759 CAPLUS
DOCUMENT NUMBER: 131:310280
TITLE: Direct condensation reaction of **carbon dioxide** with **alcohols** using trisubstituted phosphine-**carbon** tetrabromide-**base** system as a condensing agent
AUTHOR(S): Kadokawa, Jun-ichi; Hideyuki, Habu; Fukamachi, Shinji; Karasu, Masa; Tagaya, Hideyuki; Chiba, Koji
CORPORATE SOURCE: Faculty of Engineering, Department of Materials Science and Engineering, Yamagata University, Yonezawa, 992 8510, Japan
SOURCE: Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1999), (15), 2205-2208
CODEN: JCPRB4; ISSN: 0300-922X
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 131:310280
AB This paper describes the prepn. of carbonates by the direct condensation of CO2 with **alcs.** using a trisubstituted phosphine CBr4-**base** system as a condensing agent. The yield of dibenzyl carbonate from CO2 and benzyl **alc.** was at most 90.7%. The reaction of CO2 with the other primary **alcs.** such as MeOH, EtOH, butan-1-ol, hexan-1-ol, allyl **alc.**, ethylene glycol also gave corresponding carbonates in relatively high yields, whereas yields of carbonates from CO2 and secondary **alcs.** were low.
IT **105-58-8P**, Diethyl carbonate **542-52-9P**, Dibutyl carbonate **616-38-6P**, Dimethyl carbonate **623-63-2P**, Di-sec-butyl carbonate **623-96-1P**, Dipropyl carbonate **3459-92-5P**, Dibenzyl carbonate **6482-34-4P**, Diisopropyl carbonate **7523-15-1P**, Dihexyl carbonate **15022-08-9P**, Diallyl carbonate
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. by direct condensation reaction of **carbon dioxide** with **alcs.** using trisubstituted phosphine-**carbon** tetrabromide-**base** system as a condensing agent)
RN 105-58-8 CAPLUS
CN Carbonic acid, diethyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)

RN 542-52-9 CAPLUS
CN Carbonic acid, dibutyl ester (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

L6 ANSWER 6 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

RN 15022-08-9 CAPLUS
CN Carbonic acid, di-2-propenyl ester (9CI) (CA INDEX NAME)

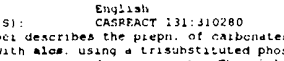


REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 6 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

RN 616-38-6 CAPLUS
CN Carbonic acid, dimethyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)

RN 623-63-2 CAPLUS
CN Carbonic acid, bis(1-methylpropyl) ester (9CI) (CA INDEX NAME)



RN 623-96-1 CAPLUS
CN Carbonic acid, dipropyl ester (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

RN 3459-92-5 CAPLUS
CN Carbonic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)

RN 6482-34-4 CAPLUS
CN Carbonic acid, bis(1-methylethyl) ester (9CI) (CA INDEX NAME)

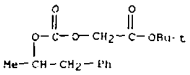
RN 7523-15-1 CAPLUS
CN Carbonic acid, dihexyl ester (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

L6 ANSWER 7 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:354967 CAPLUS
DOCUMENT NUMBER: 131:129555
TITLE: Alkyl carbonates: efficient three component coupling of aliphatic **alcohols**, CO2, and alkyl halides in the presence of Cs2CO3
AUTHOR(S): Kim, Seok-In; Chu, Feixia; Dueno, Eric E.; Jung, Kyung Woon
CORPORATE SOURCE: Department of Chemistry, University of South Florida, Tampa, FL, 33620-5250, USA
SOURCE: Journal of Organic Chemistry (1999), 64(13), 4578-4579
CODEN: JOCEAH; ISSN: 0022 3263
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 131:129555
AB A three-way coupling was performed using **alcs.**, e.g., Ph(CH2)4OH, CO2, halides, e.g., n-BuBr, leading to the exclusive prepn. of mixed alkyl carbonates, where the use of cesium **bases** was crucial due to the inherently enhanced nucleophilicities of the corresponding cesium alkoxides generated in situ from various aliph. **alcs.** Primary and secondary **alcs.** were easily incorporated into CO2, which then reacted with with various halides including secondary bromides, which are usually resistant to alkylations due to eliminations. The procedures discussed were mild enough to avoid side reactions such as hydrolysis and transesterification, common in various O-alkylation methods in the presence of esters or the equiv. Therefore, chiral substrates encompassing .alpha.-hydroxy esters, susceptible to racemization, were also durable under the developed conditions.
IT **223142-79-8P 223142-80-1P 223142-82-3P 223142-85-6P 234106-34-4P 234106-36-6P 234106-39-9P 234106-43-5P 234106-46-8P 234106-48-0P 234106-50-4P 234106-52-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(coupling of aliph. **alcs.**, CO2, and halides using cesium carbonate to give alkyl carbonates)
RN 223142-79-8 CAPLUS
CN Acetic acid, [[(4-phenylbutoxy)carbonyl]oxy] , 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

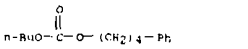
RN 223142-80-1 CAPLUS
CN Carbonic acid, 4-phenylbutyl phenylmethyl ester (9CI) (CA INDEX NAME)

RN 223142-82-3 CAPLUS

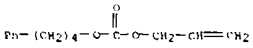
L6 ANSWER 7 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)
CN Acetic acid, [[(1-methyl-2-phenylethoxy)carbonyl]oxy]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



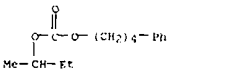
RN 223142-85-6 CAPLUS
CN Carbonic acid, butyl 4-phenylbutyl ester (9CI) (CA INDEX NAME)



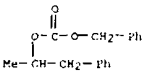
RN 234106-34-4 CAPLUS
CN Carbonic acid, 4-phenylbutyl 2-propenyl ester (9CI) (CA INDEX NAME)



RN 234106-36-6 CAPLUS
CN Carbonic acid, 1-methylpropyl 4-phenylbutyl ester (9CI) (CA INDEX NAME)

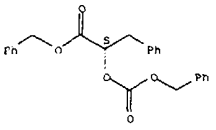


RN 234106-39-9 CAPLUS
CN Carbonic acid, 1-methyl-2-phenylethyl phenylmethyl ester (9CI) (CA INDEX NAME)



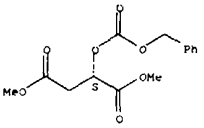
RN 234106-43-5 CAPLUS
CN Benzeneacetic acid, .alpha.-[[[(4-methoxyphenyl)methoxy]carbonyl]oxy]-, methyl ester (9CI) (CA INDEX NAME)

L6 ANSWER 7 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)



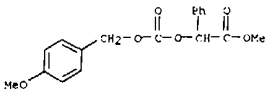
RN 234106-52-6 CAPLUS
CN Butanedioic acid, [[(phenylmethoxy)carbonyl]oxy]-, dimethyl ester, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



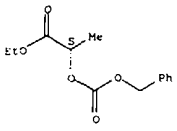
REFERENCE COUNT: 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 7 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)



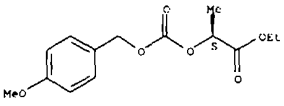
RN 234106-46-8 CAPLUS
CN Propanoic acid, 2-[[(phenylmethoxy)carbonyl]oxy]-, ethyl ester, (2S) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 234106-48-0 CAPLUS
CN Propanoic acid, 2-[[[(4-methoxyphenyl)methoxy]carbonyl]oxy]-, ethyl ester, (2S) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 234106-50-4 CAPLUS
CN Benzenepropanoic acid, .alpha.-[[(phenylmethoxy)carbonyl]oxy]-, phenylmethyl ester, (.alpha.S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L6 ANSWER 8 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1997:542834 CAPLUS
DOCUMENT NUMBER: 127:307162
TITLE: Preparation of aliphatic carbonates from **alcohols** and **carbon dioxide** using organic **bases** and sulfonate esters
INVENTOR(S): Okuda, Fumio
PATENT ASSIGNEE(S): Idemitsu Kosan Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09208530	A2	19970812	JP 1996-22211	19960208

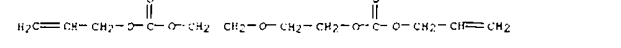
PRIORITY APPLN. INFO.: JP 1996-22211 19960208
OTHER SOURCE(S): CASREACT 127:307162
AB Aliph. carbonates, useful as monomers, are prepd. by treatment of ROH (R = C1-6 alkyl, cycloalkyl) with CO2 in the presence of org. **bases** and sulfonate esters. A mixt. of N-methyl-2-pyrrolidone, EtOH, and 1,8-diazabicyclo[5.4.0]-7-undecene was bubbled with CO2 at room temp. for 1 h and the reaction mixt. was further treated with Ph triflate while bubbling with CO2 at 100.degree. for 4 h to give 30% (based on EtOH) Et2CO3, vs. 0% for a control in the absence of Ph triflate.
IT **105-58-8P**, Diethyl carbonate
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of aliph. carbonates from **alcs.** and CO2 using org. **bases** and sulfonate esters)
RN 105-58-8 CAPLUS
CN Carbonic acid, diethyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)

L6 ANSWER 9 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1997:264558 CAPLUS
DOCUMENT NUMBER: 126:238124
TITLE: Preparation of dipropargyl carbonates
INVENTOR(S): Inoe, Yoshio
PATENT ASSIGNEE(S): Idemitsu Kosan Co, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

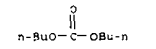
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09040615	A2	19970210	JP 1995-194401	19950731

PRIORITY APPLN. INFO.: JP 1995-194401 19950731
OTHER SOURCE(S): CASREACT 126:238124; MARPAT 126:238124
AB R1C.tplbond.CCH2OC(O)OCH2C.tplbond.CR2 (R1, R2 = H, alkyl, aryl) are prepd. by reaction of R1C.tplbond.CCH2OH (R1 = H, alkyl, aryl) with CO2 in the presence of (in)org. **bases**. Propargyl **alc.** was treated with CO2 and K2CO3 in AcNMe2 at 80.degree. for 45 h to give 12% dipropargyl carbonate.
IT **79493-91-7P**, Dipropargyl carbonate
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of dipropargyl carbonates from propargyl **alcs.** and CO2)
RN 79493-91-7 CAPLUS
CN 2-Propyn-1-ol, carbonate (2:1) (9CI) (CA INDEX NAME)

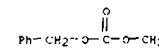
L6 ANSWER 10 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1995:797781 CAPLUS
DOCUMENT NUMBER: 124:55491
TITLE: Replacement of Phosgene with **Carbon Dioxide**: Synthesis of Alkyl Carbonates
AUTHOR(S): McGhee, William; Riley, Dennis
CORPORATE SOURCE: Monsanto Company, St Louis, MO, 63167, USA
SOURCE: Journal of Organic Chemistry (1995), 60(19), 6205 / CODEN: JOCEAH; ISSN: 0022-3263
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 124:55491
AB Mixed or sym. dialkyl-carbonates were generated in high yields (53-97%) from **alcs.**, **carbon dioxide** and alkyl chlorides in apolar aprotic solvents using guanidine **bases** under mild conditions.
IT **142-22-3P 542-52-9P**, Dibutyl carbonate **3459-92-5P**, Dibenzyl carbonate **53859-34-0P**, Benzyl butyl carbonate **144397-85-3P**, Benzyl 1 methylethyl carbonate **147350-03-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis of alkyl carbonates)
RN 142-22-3 CAPLUS
CN 2,5,8,10-Tetraoxatridec-12-enoic acid, 9-oxo-, 2-propenyl ester (9CI) (CA INDEX NAME)



RN 542-52-9 CAPLUS
CN Carbonic acid, dibutyl ester (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

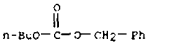


RN 3459-92-5 CAPLUS
CN Carbonic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)

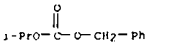


RN 53859-34-0 CAPLUS
CN Carbonic acid, butyl phenylmethyl ester (9CI) (CA INDEX NAME)

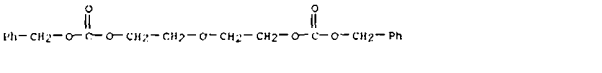
L6 ANSWER 10 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)



RN 144397-85-3 CAPLUS
CN Carbonic acid, 1-methylethyl phenylmethyl ester (9CI) (CA INDEX NAME)



RN 147350-03-6 CAPLUS
CN 2,4,7,10-Tetraoxaundecan-11-oic acid, 3-oxo-1-phenyl-, phenylmethyl ester (9CI) (CA INDEX NAME)



L6 ANSWER 11 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1994:408694 CAPLUS
DOCUMENT NUMBER: 121:8694
TITLE: Preparation of urethanes and carbonates
INVENTOR(S): McGhee, William D.; Talley, John J.
PATENT ASSIGNEE(S): Monsanto Co., USA
SOURCE: U.S., 8 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5302747	A	19940412	US 1992-961734	19921015
WO 9408952	A1	19940428	WO 1993-US8380	19930907
W: CA, JP, KR				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CN 1090842	A	19940817	CN 1993-119140	19931014

PRIORITY APPLN. INFO.: US 1992-961734 19921015
OTHER SOURCE(S): CASREACT 121:8694; MARPAT 121:8694
AB The present invention provides a process for prepg. urethanes and carbonates from an amine or an **alc.**, **carbon dioxide** and a hydrocarbyl halide. The amine or **alc.** is reacted with **carbon dioxide** in a suitable solvent system and in the presence of a **base** selected from the group consisting of a phosphazene compd. and a mixt. of a phosphazene compd. and an org., nitrogeneous **base**, to form the ammonium carbamate or carbonate salt which is then reacted in a polar aprotic solvent with a hydrocarbyl halide. Thus, BuNH2 and 2 tert-butylamino-2-diethylamino-1,3 dimethylperhydro-1,3,2-diazaphosphorane were pressurized with 20 psig CO2; a mixt. of PhCH2Cl and CH3CN was similarly pressurized with CO2 and after 1h the contents of the PhCH2Cl-contg. vessel were added to the amine-contg. vessel and the mixt. was heated to 50.degree. to give 80.5% calcd. yield of N-Bu benzyl carbamate.
IT **53859-34-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 53859-34-0 CAPLUS
CN Carbonic acid, butyl phenylmethyl ester (9CI) (CA INDEX NAME)

Kamal Saeed

L6 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1993:213762 CAPLUS
DOCUMENT NUMBER: 118:213762
TITLE: Phosgene-free process for preparing urethane and carbonate monomers and polymers
INVENTOR(S): McGhee, William Dennis; Parnas, Barry Lawrence; Riley, Dennis Patrick; Talley, John Jeffrey
PATENT ASSIGNEE(S): Monsanto Co., USA
SOURCE: Eur. Pat. Appl., 34 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 511948	A2	19921104	EP 1992-870065	19920427
EP 511948	A3	19930414		
EP 511948	B1	19971105		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, PT, SE				
US 5223638	A	19930629	US 1991-692857	19910429
AT 159942	E	19971115	AT 1992-870065	19920427
CA 2067433	AA	19921030	CA 1992-2067433	19920428
AU 9215221	A1	19921105	AU 1992-15221	19920428
AU 654542	B2	19941110		
JP 05117222	A2	19930514	JP 1992-116181	19920428
JP 3273059	B2	20020408		
US 5260473	A	19931109	US 1992-976809	19921116
US 5344934	A	19940906	US 1992-976633	19921116
US 5371183	A	19941206	US 1992-976746	19921116
US 5449748	A	19950920	US 1993-173233	19931227
CN 1224001	A	19990728	CN 1998-116122	19980715

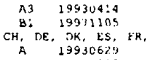
PRIORITY APPLN. INFO.: US 1991-692857 A 19910429
US 1992-976746 A3 19921116
OTHER SOURCE(S): MARPAT 118:213762

AB The title process comprises reaction of CO2 with amines, **alcs.**, or amino **alcs.** in the presence of an amidine- or guanidine-type **base** followed by treating the resulting ammonium carbamate or carbonate salts with a primary or secondary hydrocarbyl halide of a specified structure in a polar, aprotic solvent. When hydrocarbyl dihalides or -polyhalides are used in the 2nd step, polyurethanes and polycarbonates are formed. Thus, 160 psig CO2 was added above a stirred mixt. of 4,4'-methylenebis(cyclohexylamine), N cyclohexyl-N',N',N'',N''-tetraethylguanidine (I), and N-methylpyrrolidinone (II) in an autoclave. After 1 h, a soln. of 1,4-dichlorobutane in II was added at once, the CO2 inlet was shut off, stirred for 5 h at 85.degree. And cooled to 40.degree., an addnl. amt. of 1,4-dichlorobutane was added and the was stirring continued for 14 h at 85.degree. to give a Cl-terminated prepolymer having no.-av. mol. wt. (Mn) 1570. A mixt. of the latter, Jeffamine D-2000, I, and II was pressurized with 160 psig CO2 and stirred for 3 h at 105.degree. to give a polyurethane having Mn ~ 8000.

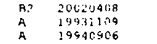
IT **142-22-3P**, Diethylene glycol bis(allyl carbonate)
542-52-9P, Dibutyl carbonate **3459-92-5P**, Dibenzyl carbonate **53859-34-0P** **144397-85-3P**

L6 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)
147350-03-6P
RL: PREP (Preparation)
(prepn. of, phosgene-free process for)
RN 142-22-3 CAPLUS
CN 2,5,8,10 Tetraoxatridec-12 enoic acid, 9-oxo-, 2-propenyl ester (9CI) (CA INDEX NAME)

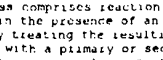
RN 542-52-9 CAPLUS
CN Carbonic acid, dibutyl ester (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



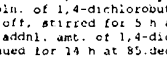
RN 3459-92-5 CAPLUS
CN Carbonic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)



RN 53859-34-0 CAPLUS
CN Carbonic acid, butyl phenylmethyl ester (9CI) (CA INDEX NAME)

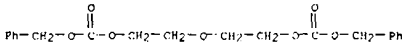


RN 144397-85-3 CAPLUS
CN Carbonic acid, 1-methylethyl phenylmethyl ester (9CI) (CA INDEX NAME)



RN 147350-03-6 CAPLUS
CN 2,4,7,10-Tetraoxaundecan-11-oic acid, 3-oxo-1-phenyl-, phenylmethyl ester (9CI) (CA INDEX NAME)

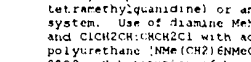
L6 ANSWER 17 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)



L6 ANSWER 17 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1993:212460 CAPLUS
DOCUMENT NUMBER: 118:212460
TITLE: Palladium-catalyzed generation of O allylic urethanes and carbonates from amines/**alcohols**, **carbon dioxide**, and allylic chlorides
AUTHOR(S): McGhee, William D.; Riley, Dennis P.; Christ, Matthew E.; Christ, Kevin M.
CORPORATE SOURCE: Monsanto Co., St. Louis, MO, 63167, USA
SOURCE: Organometallics (1993), 12(4), 1429-33
CODEN: ORGND7; ISSN: 0276-7333
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 118:212460

AB Addn. of preformed carbamate anions RR1NCO2 , generated from various primary and secondary amines and CO2, to THF solns. of allylic chlorides under 80-100 psig **carbon dioxide** at room temp. (or 30.degree.) contg. a palladium/phosphine catalyst gave high yields and high selectivities of O-allylic urethanes (66-100%). The choice of added **base** in the generation of carbamate was crit. for high yields of O-allylic products. The use of a guanidine (N cyclohexyl-N',N',N'',N'' tetramethylguanidine) or amidine (DBU) **base** is optimal for this system. Use of diamine MeNH(CH2)6NHMe, CO2, 2 equiv of **base**, and ClCH2CH:CHCH2Cl with added palladium/phosphine catalyst gave polyurethane [NMe(CH2)6NMeCO2CH2CH:CHCH2C]x with Mn = 5400 and Mw = 8900. Substitution of benzyl **alc.** for the amines in this catalytic process gave an 88% yield of benzyl allyl carbonate. The rate of appearance of PhCH2NEtCO2CH2CH:CH2 from PhCH2NHEt, CO2, and H2C:CHCH2Cl
catalyzed by a palladium/phosphine complex was detd. for four concns. of catalyst, and indicated a first-order dependence on catalyst concn. With a
turnover no. of 2600 mol per h per mol of catalyst.

IT **22768-01-0P**, Allyl benzyl carbonate
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, via condensation of **alc.**, **carbon dioxide**, and allylic chloride, palladium-catalyzed)
RN 22768-01-0 CAPLUS
CN Carbonic acid, phenylmethyl 2-propenyl ester (9CI) (CA INDEX NAME)

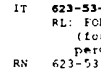


L6 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1992:135528 CAPLUS
DOCUMENT NUMBER: 116:135528
TITLE: Performance-oriented packaging standards; changes to classification, hazard communication, packaging and handling requirements based on UN standards and agency initiative
CORPORATE SOURCE: United States Dept. of Transportation, Washington, DC, 20590-0001, USA
SOURCE: Federal Register (1990), 55(246), 52402-729, 21 Dec 1990
CODEN: FEREAC; ISSN: 0097-6326
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The hazardous materials regulations under the Federal Hazardous Materials Transportation Act are revised based on the United Nations recommendations on the transport of dangerous goods. The regulations cover the classification of materials, packaging requirements, and package marking, labeling, and shipping documentation, as well as transportation modes and handling, and incident reporting. Performance-oriented stds. are adopted for packaging for bulk and nonbulk transportation, and SI units of measurement generally replace US customary units. Hazardous material descriptions and proper shipping names are tabulated together with hazard class, identification nos., packing group, label required, special provisions, packaging authorizations, quantity limitations, and vessel stowage requirements.
IT **105-58-8**, Diethyl carbonate **616-38-6**, Dimethyl carbonate
RL: ADV (Adverse effect, including toxicity); PREP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(packaging and transport of, stds. for)
RN 105-58-8 CAPLUS
CN Carbonic acid, diethyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)

RN 616-38-6 CAPLUS
CN Carbonic acid, dimethyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)

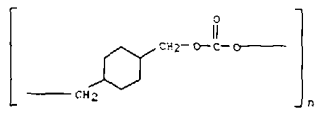
L6 ANSWER 15 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)

L6 ANSWER 15 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1985:105028 CAPLUS
DOCUMENT NUMBER: 102:105028
TITLE: Facile **carbon dioxide** uptake by zinc(II)-tetraazacycloalkane complexes. 1. Syntheses, characterizations, and chemical properties of (monoalkyl carbonato)(tetraazacycloalkane)zinc(II) complexes
AUTHOR(S): Kato, Masako; Ito, Tasuku
CORPORATE SOURCE: Inst. Mol. Sci., Okazaki Natl. Res. Inst., Okazaki, 444, Japan
SOURCE: Inorganic Chemistry (1985), 24(4), 504-8
CODEN: INOCAJ; ISSN: 0020-1669
DOCUMENT TYPE: Journal
LANGUAGE: English
AB [ZnL](ClO4)2 take up CO2 in MOH very easily and reversibly at room temp. to give (L = 1,4,8,11-tetraazacyclotetradecane ([14]aneN4) and its 5,12-dimethyl and 1,4,8,11-tetramethyl derivs., 1,4,8,12-tetraazacyclopentadecane ([15]aneN4); R = Me, Et) and [ZnL](O2COR)2(ClO4)4 (L = [15]aneN4; R = Bu). These complexes were characterized by IR and NMR spectroscopies. Generally, addn. of a **base** such as NaOR or NEt3 facilitates the uptake reaction of CO2. For [ZnL](ClO4)2 (L = [14]aneN4 or [15]aneN4) in MeOH, the reaction proceeds spontaneously in a neutral soln. Itorsim.10.degree., CO2 being taken up from the air. [ZnL(O2COR)]ClO4 exist in CHCl3 and CH2Cl2 in equil. with [ZnL(OR)]-. The equil. involves reversible desorption and absorption of CO2. A decrease in temp. shifts the equil. toward the increase in the amt. of [ZnL(O2COR)]-. For the [15]aneN4 system, the equil. const. (K = [Zn([15]aneN4)O2COMe]/[Zn([15]aneN4)OMe][CO2]) is K20.2.degree.C = 5.8 M-1. The monoalkyl carbonato ligand was converted into dialkyl carbonate by treatment with FSO3R (R = Me, or Et). Various factors affecting the efficient CO2 uptake are discussed.
IT **616-38-6P**
RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, from (Me carbonato)(tetraazacycloalkane)zinc perchlorate and Me fluorosulfate)
RN 616-38-6 CAPLUS
CN Carbonic acid, dimethyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)



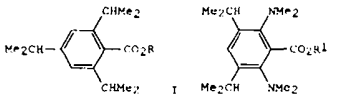
IT **623-53-0P**
RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, from (alkyl carbonato)(tetraazacycloalkane)zinc perchlorate and alkyl fluorosulfate)
RN 623-53-0 CAPLUS
CN Carbonic acid, ethyl methyl ester (7CI, 8CI, 9CI) (CA INDEX NAME)

L6 ANSWER 16 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1984:407744 CAPLUS
DOCUMENT NUMBER: 101:7744
TITLE: Urea as a **carbon dioxide** source in the synthesis of carbonates and polycarbonates
AUTHOR(S): Schwalm, R.; Ball, P.; Fullmann, H.; Heitz, W.
CORPORATE SOURCE: Fachbel. Phys. Chem. Polym., Philipps-Univ., Marburg, 3550, Fed. Rep. Ger.
SOURCE: Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (1984), 25(1), 272-3
CODEN: ACPPAY; ISSN: 0032 3934
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The reaction of 2 ethylhexanol [104-76-7] and 6-methyl-2-heptanol [4730-22-7] with urea [57-13-6] using dialkyltin compds. as catalysts gave carbonates with high yields. The reaction of phenols with urea gave only low yields of carbonates, and the rate of decomp. of phenylcarbamates increased with increasing polarity of the solvent and was accelerated in the presence of a **base** or a strong mineral acid. Polycarbonates were prepd. by treating urea with an equimolar amt. of diol and an appropriate mole ratio of monofunctional alc. followed by transesterification.
IT **26894-28-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 26894-28-0 CAPLUS
CN Poly(oxycarbonyloxymethylene-1,4-cyclohexanediylmethylene) (9CI) (CA INDEX NAME)



Kamal Saeed

L6 ANSWER 17 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1981:424467 CAPLUS
DOCUMENT NUMBER: 95:24467
TITLE: Dipole stabilized carbanions from esters: .alpha. oxo
lithiations of 2,6-substituted benzoates of primary **alcohols**
AUTHOR(S): Beak, Peter; Carter, Linda G.
CORPORATE SOURCE: Roger Adams Lab., Univ. Illinois, Urbana, IL, 61801, USA
SOURCE: Journal of Organic Chemistry (1981), 46(11), 2363-73
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I II

AB The synthetic utility of dipole-stabilized carbanions from esters is illustrated by the prepn., .alpha.-oxo lithiation, electrophilic substitution, and cleavage of 2,4,6-triisopropylbenzoates I and 2,6-bis(dimethylamino)-3,5-diisopropylbenzoates II of primary **alcs**. Typical electrophiles used in this methodol. include primary alkyl halides, aldehydes, ketones, Me3SiCl, and Bu3SnCl. I are cleaved with LiAlH4, whereas II are hydrolyzed under acidic conditions. The 2,6-substitution of I and II enforces the orthogonality of the carbonyl group and the Ph ring and thereby inhibits addn. to the carbonyl by the organolithium **base** used for the metalation by placing the substituents in the trajectory for nucleophilic addn. along the LUMO of the carbonyl. The acidic hydrolysis of II under conditions where I can be
stable is attributed to protonation of the Me2N group which provides subsequent assistance for nucleophilic addn. These metalations provide the key steps in the prepn. of secondary .alpha.-lithio **alc.** synthetic equiv. from primary **alcs.** Lithiation of I (R = CHMePh) proceeds .alpha. to oxygen as expected, but attempts to prep. analogous unactivated tertiary .alpha.-lithio esters were unsuccessful. Lithiation of I (R = CH2CH2OMe) is followed by elimination of MeO and .alpha.-oxo metalation of the resulting vinyl ester. Lithiation of I (R = allyl) gives 1-(2,4,6-triisopropylphenyl)-1,2-butanedione by rearrangement.
IT **105-58-8**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with triisopropylbromobenzene)

L6 ANSWER 17 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN (Continued)
RN 105-58-8 CAPLUS
CN Carbonic acid, diethyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)

L6 ANSWER 18 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1979:438938 CAPLUS
DOCUMENT NUMBER: 91:38938
TITLE: Dialkyl carbonates
INVENTOR(S): Buysch, Hans Josef; Krimm, Heinrich; Rudolph, Hans
PATENT ASSIGNEE(S): Bayer A. G., Fed. Rep. Ger.
SOURCE: Ger. Offen., 15 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2748718	A1	19790503	DE 1977-2748718	19771029
EP 1777	A1	19790516	EP 1978-101151	19781014
EP 1777	B1	19800723		
R: BE, CH, DE, FR, GB, LU, NL				
JP 54070221	A2	19790605	JP 1978-131740	19781027
JP 60027659	B4	19850629		
US 4434105	A	19840228	US 1980-163912	19800627
PRIORITY APPLN. INFO.:			DE 1977-2748718	19771029
			US 1979-51658	19790625

AB Dialkyl carboonates were prepd. by the reaction of an aliph. or cycloaliph. **alc.** with an alkylene oxide and CO2 in the presence of a catalyst at 90-280.degree. and 3-500 bar CO2 pressure. Thus, a mixt.
of MeOH 643, ethylene oxide 53, NaI 2 and TlOH 0.2 g pressured to 100 bar with CO2 and held 2 h at 160.degree., then 1/2 h at 150.degree. after bleeding of CO2, gave 102 g (MeO)2CO.
IT **105-58-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, by ethanol condensation with **carbon dioxide**)
RN 105-58-8 CAPLUS
CN Carbonic acid, diethyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)

IT **616-38-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, by methanol condensation with **carbon dioxide**)
RN 616-38-6 CAPLUS
CN Carbonic acid, dimethyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)

L6 ANSWER 19 OF 19 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1934:58412 CAPLUS
DOCUMENT NUMBER: 28:58412
ORIGINAL REFERENCE NO.: 28:7115b-d
TITLE: The conductivity of methoxides and ethoxides
AUTHOR(S): Jones, G. E. M.; Hughes, O. L.
SOURCE: Journal of the Chemical Society, Abstracts (1934) 1197-1207
CODEN: JCSAAZ; ISSN: 0590-9791
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB The elec. cond. at 25.degree. was measured for the following solns.: in MeOH the methoxides and Me carbonates of Li, Na and K, and in EtOH the corresponding derivs. of the same 3 metals. Further, CO2 and NH3 were investigated in both **alcs.**, and CO2 in MeOH. The following mobility values were detd.: OMe- 53.3, OEt- 24.5, MeCO3- 45.4, EtCO3 20.7. The following dissocn. consts. were also detd.: in MeOH, CO2 2 .times. 10-10, NH3 2 .times. 10 6; and in EtOH, CO2 6 .times. 10-12, NH3 1.5 .times. 10-7. The nature and amt. of impurities in the solvent were discussed, and a method was worked out for the solvent correction of cond.
data for **bases.**
IT **616-38-6**, Methyl carbonate
(mobility of ion (MeCO3-) of)
RN 616-38-6 CAPLUS
CN Carbonic acid, dimethyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)

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Kamal Saeed